Non-Motorized Transportation: Bicycle and Pedestrian Issues

TRANSPORTATION AND COMMUNICATIONS COMMITTEE ATTACHMENT #5.4
Thursday, April 3, 2003

MEMO

DATE: April 3, 2003

TO: Transportation & Communications Committee

FROM: 2F Zahi Faranesh, Manager – Special Projects & Coordination
213-236-1819 / faranesh@scag.ca.gov

RE: **Non-Motorized Transportation: Bicycle and Pedestrian Issues**

RECOMMENDED ACTION:

Receive and File.

BACKGROUND:

Bicycle and Pedestrian issues and strategies papers have been prepared by SCAG staff to be used for input for development of the 2004 RTP Update. Both papers have been presented to, and received by the RTDM Task Force.

SUMMARY:

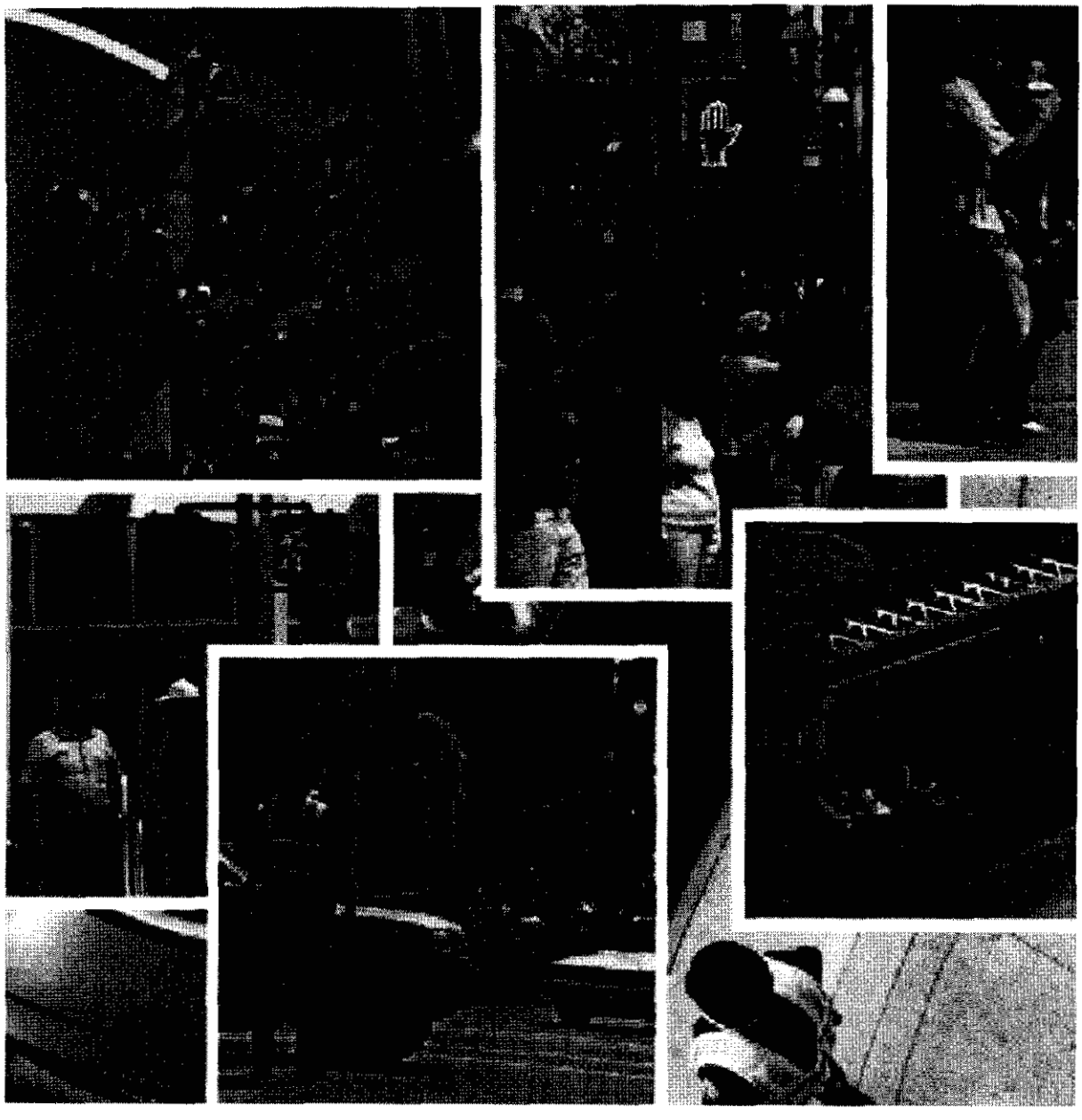
The Pedestrian and Bicycle Issues and Strategies papers recommend a number of actions to be considered for inclusion in the 2004 RTP. These actions include support of bicycle commuter lanes, bicycle storage facilities, provision of commuter bicycle routes, identification of high accident pedestrian locations, support for planning of pedestrian and bicycle access to transit facilities, and pursuit of funding sources for non-motorized transportation.

Pedestrian Issues & Strategies

January 16, 2003

Prepared by the Southern California Association of Governments (FY02 Work Element #02-0049: Non-Motorized Transportation)

A paper to be used in consideration of development of the 2004 Regional Transportation Plan for Southern California.



What distinguishes a great walking city from your everyday Ameritropolis? In short an environment that makes it more compelling to stroll the sidewalks than to see it from behind a steering wheel.

- Dan Zevin, Walking Magazine 1991 "America's Most Walkable Cities"

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EXECUTIVE SUMMARY

Pedestrian mobility in urban, suburban and rural areas presents obstacles unique to each environment. There are, however, a number of key areas relevant to any environment, including:

- Pedestrian safety at points of contact with vehicular traffic.
- Access to schools and other public facilities where children are present.
- Requirements of the Americans with Disabilities Act (ADA Requirements).
- Convenience and aesthetics.

This paper identifies pedestrian issues related to these four areas, but particularly in reference to urban pedestrian movement and access to transit stations, as part of a commuter trip that begins and ends on foot.

Pedestrian issues:

- General requirements for disabled persons (ADA)
- Access to and from Park & Ride Facilities
- Traffic calming and other vehicular traffic management techniques
- Traffic Control Devices
- Barriers and Bottlenecks (freeways and ramps, parking structures...)

Also incorporated in the paper is a general outline of strategies that can be used to identify problem areas for pedestrian movements, solutions to these problems, and a summary of funding sources and programs.

Strategies for improving pedestrian mobility:

- Collection of pedestrian-related accident data.
- GIS and mapping tools.
- Streetscape and Boulevard Improvements.
- Effective public parking plans.
- Zoning, Land Use and Permit Conditions.
- Infrastructure improvements and improved pedestrian movement.
- Funding programs.
- Current California Legislative Bills.

Finally, the paper makes the following recommendations for action in preparation of the 2004 Regional Transportation Plan:

- Action: Define likely causes of pedestrian-related incidents.
- Action: Determine key accident locations & trends.
- Action: Coordinate pedestrian mobility planning efforts with Growth Visioning.
- Action: Evaluate funding availability.
  - ✓ Compile a list of funding sources, purpose & availability
  - ✓ Apply for planning grant funds
  - ✓ Circulate funding sources & availability

INTRODUCTION

The ideal urban arterial street must safely accommodate the transport and storage of private vehicles, trucks, buses, emergency vehicles, bicyclists and pedestrians. Additionally there are basic requirements that must be met: safety, ADA compliance, ease of movement and contiguous access along arterial streets between residential neighborhoods, transit, retail corridors, parks, institutions, businesses and other facilities. Finally, streets should be aesthetically pleasing for all travel modes.

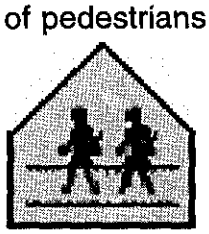
The myriad demands on urban streets create conflicting goals for street design. For example, retail businesses garner the attention of vehicular traffic with large curb-front or rooftop signs and lights that will catch the eye of a passing motorist. But at eye level, these signs can be virtually unseen, towering above the sidewalk beyond sight of foot traffic.

Other conflicts and obstructions are common to pedestrians: driveways, high-speed access ramps to freeways, major intersections with difficult or non-existent crosswalks, wide boulevards, school crossings and so on.

What are Pedestrian Facilities?
Pedestrian facilities include sidewalks, crosswalks, traffic control features, special walkways found on some portions of freeway right-of-way, and curb cuts (depressions) and ramps for the older walkers and persons with mobility impairments. They are also parts of bus stops or other loading areas, grade separations, and the stairs or escalators related to these facilities.

Policy on Geometric Design of Highways and Streets (1994 AASHTO GREEN BOOK) page 97, "The Pedestrian."

This paper outlines issues concerning pedestrians and strategies for meeting the needs of pedestrians on arterial streets. The focus of the paper is to better meet the needs of



commuting pedestrians, including foot-trips before/after commutes by other modes such as mass transit, private vehicle, ride-share and bicycle. Hiking, trails, recreational walking and other non-commuting types of pedestrian travel are not included in this paper. However, a bibliography is attached with sources and information for the recreational walker.

The objective of this paper is to provide a summary of issues, strategies, recent historical information, funding options, and public outreach for use in preparing the Southern California Association of Government's 2004 Regional Transportation Plan.

STREETSCAPES

Sidewalks can be and should be, the most attractive part of a business street.[1]

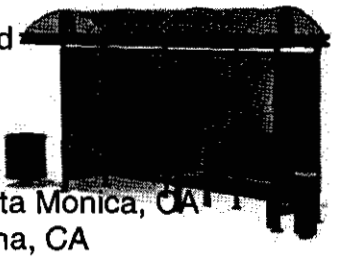
- Studies in City Planning, copyright 1937

Urban streetscapes have impacts that extend beyond basic needs of pedestrian mobility and safety.

Streetscapes set a mood along arterial streets that impacts neighborhoods and

- ✓ Commercial corridors. The streetscape can greatly influence the vitality and economic development of a corridor, and therefore, an entire community. Friendly, safe and attractive streetscapes draw people, business and economic growth.

Examples of successful and very different streetscapes in the US include:



- ✓ 3rd St. Promenade, Santa Monica, CA
- ✓ Colorado Blvd, Pasadena, CA
- ✓ Santa Monica Blvd, West Hollywood, CA
- ✓ Burbank, CA
- ✓ Riverside, CA
- ✓ Long Beach, CA Transit Mall & Promenade

What is a Streetscape?

A Streetscape Project is any street or sidewalk related enhancement for community identity and beautification in the public right of way, including streetlights, trees, crosswalks, street furniture, bus stops and landscape plantings.

Streetscape projects are aimed at improving air quality, street appearance, and traffic circulation; promoting and enhancing pedestrian activities; beautifying the city landscape, including sidewalk and crosswalk enhancement, street tree planting, pedestrian lighting and traffic island landscaping.

Source: City of Los Angeles, Dept. of Public Works, City Streetscape Projects

Additional facilities in a streetscape project may include:

- ***Benches***
- ***Gathering Areas***
- ***Artwork***
- ***Bicycle Racks or Storage Areas***
- ***Traffic Calming Measures***
- ***Information Kiosks & Banners***
- ***Crosswalk Texturing & Coloring***
- ***Decorative Trash Receptacles***

Maintenance

Perhaps more important than the design, funding and construction of a streetscape project is a maintenance program. The best of designs will fail without upkeep and continued maintenance. Community groups, local Chambers of Commerce, Merchants Associations and neighborhood groups should be involved from the onset, and willing to commit to the long-term success of the project.

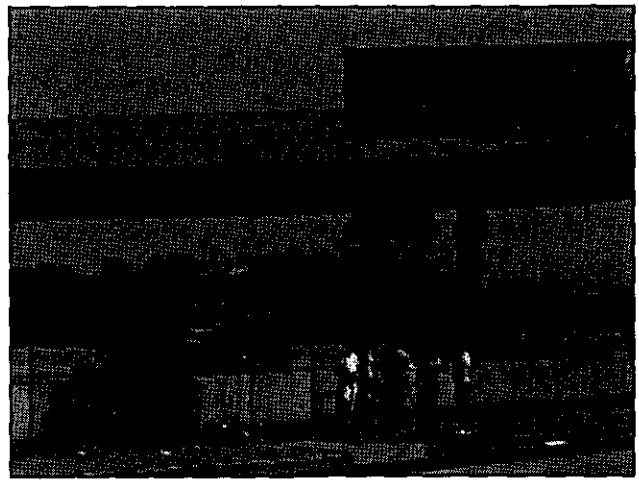
[1] *Page 94, Studies in City Planning: Shopping Districts By S.R. De Boer, The Bradford-Robinson Printing Co., Denver c.1937*

EVALUATION of PEDESTRIAN MOVEMENTS

There are a number of criteria that can be used to evaluate and prioritize the need for pedestrian improvements and facilities in urban areas.

Among these criteria are:

- Americans With Disabilities Act
- Access to Schools
- Access to Transit Facilities
- Accident Data
- GIS Tools



American with Disabilities Act

The Americans with Disabilities Act (ADA) was signed into law in 1990 and requires that all public facilities be accessible to people with disabilities. Public facilities include restaurants, sidewalks, buses, train stations, shopping centers, and parks; essentially any entity accessible to the public. According to the US Dept. of Transportation, there are over 54 million disabled Americans in the United States.

The impact of the ADA has been far-reaching. For example: multi-level facilities, including transit stations, must include elevators, sidewalks must have sloped surfaces at intersections and other crossings to allow wheelchair accessibility, buses must have lifts, and signage must include Braille for the blind.

Additional information about ADA and requirements can be found at the U.S. Department of Justice web site at: www.usdoj.gov/crt/ada/adahom1.htm

Access to Schools

Pedestrian access to schools and nearby neighborhoods is a paramount safety issue. Clear crosswalks, signals timed to allow children to cross streets before and after school, crossing guards, school speed limit zones provide a safer environment for children on foot. Additionally, pathways and neighborhood parks can provide easier and safer access to schools by allowing children, both on foot and on bicycles, to reach schools safely from nearby neighborhoods and bus stops.

Access to Transit Stations

Transit stations primarily consist of light and heavy rail stations, bus depots and stops. Each of these types of stations serve a different type of commuter, as described below:

Light Rail Stations

Light rail train stations include subways, elevated and at-grade trains or trolleys that make frequent stops, typically in densely populated urban areas. Light rail train stations are largely dependent on the adjacent population base, but may also be served by Park-and-Ride lots or feeder services from buses and occasionally, heavy rail. As noted in the study referenced in the box at right, pedestrians must be relatively close to a rail station or people will not walk to it.

Without incentives such as convenience (travel time), cost savings, or lack of any other means of transportation, people will drive before using light rail. However, the convenience of travel by rail or bus is sometimes sufficient in itself; the commute time can be used for other purposes such as reading, work, or sleeping.

Linking transit and Pedestrians
A number of studies, such as a mode split study conducted in Columbus, Ohio, have found that people's willingness to walk (to a transit station) drops off rapidly with distances beyond 2 blocks or a quarter mile.
...
An analysis of the 1977 National Personal Transportation Study, for example, found that 13 percent of U.S. workers living within 1/4 mile of a transit stop use transit to get to work, but this falls to 8 percent for those 1/4 to 1/2 mile from a stop, and to 4 percent for those living between 0.5 and 2.0 miles from a stop.

SOURCE: Case Study No. 9: Linking Bicycle/Pedestrian Facilities with Transit Publication No. FHWA-PD-93-012, Page 62

In addition to proximity to a densely populated area, transit stations can benefit from Park and Ride lots and/or bus depots. These facilities expand the pool of potential riders by bringing them to a central point. Care must be taken during the design and operations development phases so that transits centers don't become a pedestrian hazard in themselves. Transit centers require a convergence of privately owned vehicles, buses and pedestrians that can create pedestrian and traffic hazards if not carefully planned. Pedestrian and vehicular access should be separated and clear, and bus depots in particular must be designed to provide convenient and safe access between bus traffic and connecting modes of transportation.

Heavy Rail Transit

Heavy rail includes full-gauge trains generally operating with diesel locomotives or electrified rail. Many of the same characteristics that apply to light rail transit also apply to heavy rail, in terms of station requirements. Heavy rail however, travels much greater distances at higher speeds, and with fewer stops. Heavy rail transit usually serves suburban/rural populations outside of central cities destined for urban centers.

Heavy rail draws its passenger base from a much wider area than does light rail. Riders typically drive to a station Park and Ride lot, or commute to a rail station by bus, and commute by rail into urban areas. As a result, parking and a well-served suburban bus system are essential to the system.

Park & Ride

Park & Ride lots at transit centers and near major corridors can provide additional commuting options for long distance commuters. While the park and ride lot is not typically pedestrian oriented, it's important to design a safe environment for commuters gathering at Park & Ride lots to carpool, and for those connecting to mass transit systems.

Pedestrian and bicycle facilities at transit stations offer ...the potential of highly cost effective reductions in air pollution emissions, increased transit ridership, alleviation of chronic capacity shortages at many park-and-ride lots, and reduced traffic congestion near transit stations.

SOURCE: Page 1, Case Study No. 9: Linking Bicycle/Pedestrian Facilities with Transit Publication No. FHWA-PD-93-012

Studies have shown that many Park & Ride users drive 3 miles or less to facilities. If adequate transit, pedestrian and bicycle facilities are provided within this radius, particularly surrounding transit stations, communities can encourage alternative means to access mass transit. As a result of fewer vehicle trips, traffic congestion and air pollution can be reduced, land for parking facilities can be reduced, and the cost of expanding Park & Ride lots can be expended on non-motorized accessibility options.

Above left: Secure and locked bicycle storage in Chicago at the Addison Red Line elevated rail station.
Above right: Bicycle racks on a residential street in Chicago.

Accident Data

Police reports provide hard statistics that will point to needed improvements at particular locations. The reports must include a level of detail for a reasonable historical period for analysis. Accident location type time of day and other factors must be clearly identified in police reports to be effective. Due to inconsistencies in the methods used in the collection of accident data by local police jurisdictions the detail required for analyzing pedestrian accident is not always available.

- About 125 bicyclists and 600 pedestrians are killed on California streets each year.
- About 25% of all traffic-related fatalities involve bicyclists and pedestrians.
- 34% of bicyclists killed by cars in California are under 18 years old.

Pedestrian accident data can be collected and prioritized for accidents involving pedestrians at specific locations. By analyzing accident data at specific locations, site deficiencies can be evaluated and solutions (engineering plans) can be developed to improve safety at hazardous locations. Finally, the plan can be implemented with the construction of improvements.

The use of accident data provides information needed to justify funding for projects as well as helping to identify and prioritize hazardous conditions. There is a wide variety of funding mechanisms available for safety improvements, and these improvements can provide additional aesthetic and other improvements to the streetscape.

Population and business densities can be used to evaluate the potential for pedestrian activity on local streets. For residential areas, lot size, building type and socio-economic characteristics can provide an insight into demand for pedestrian facilities.

Inequities in Pedestrian Deaths

By HUGO MARTÍN and MALOY MOORE, Times Staff Writers
[an excerpt from LA Times Article published August 19, 2002]
Safety: Times study finds Latinos, seniors at highest risk. L. A. County leads in walker fatalities.

A [Los Angeles] Times analysis of more than 2,500 pedestrian deaths from 1993 through 2001 found that although the fatal accidents are concentrated in densely populated urban neighborhoods, the county's deadliest streets are not necessarily its busiest. The study also found that government efforts to improve pedestrian safety have not always occurred in areas with the most deaths.

The deaths occur in crowded urban neighborhoods that, like Echo Park, are bisected by busy thoroughfares that commuters use to avoid crowded freeways.

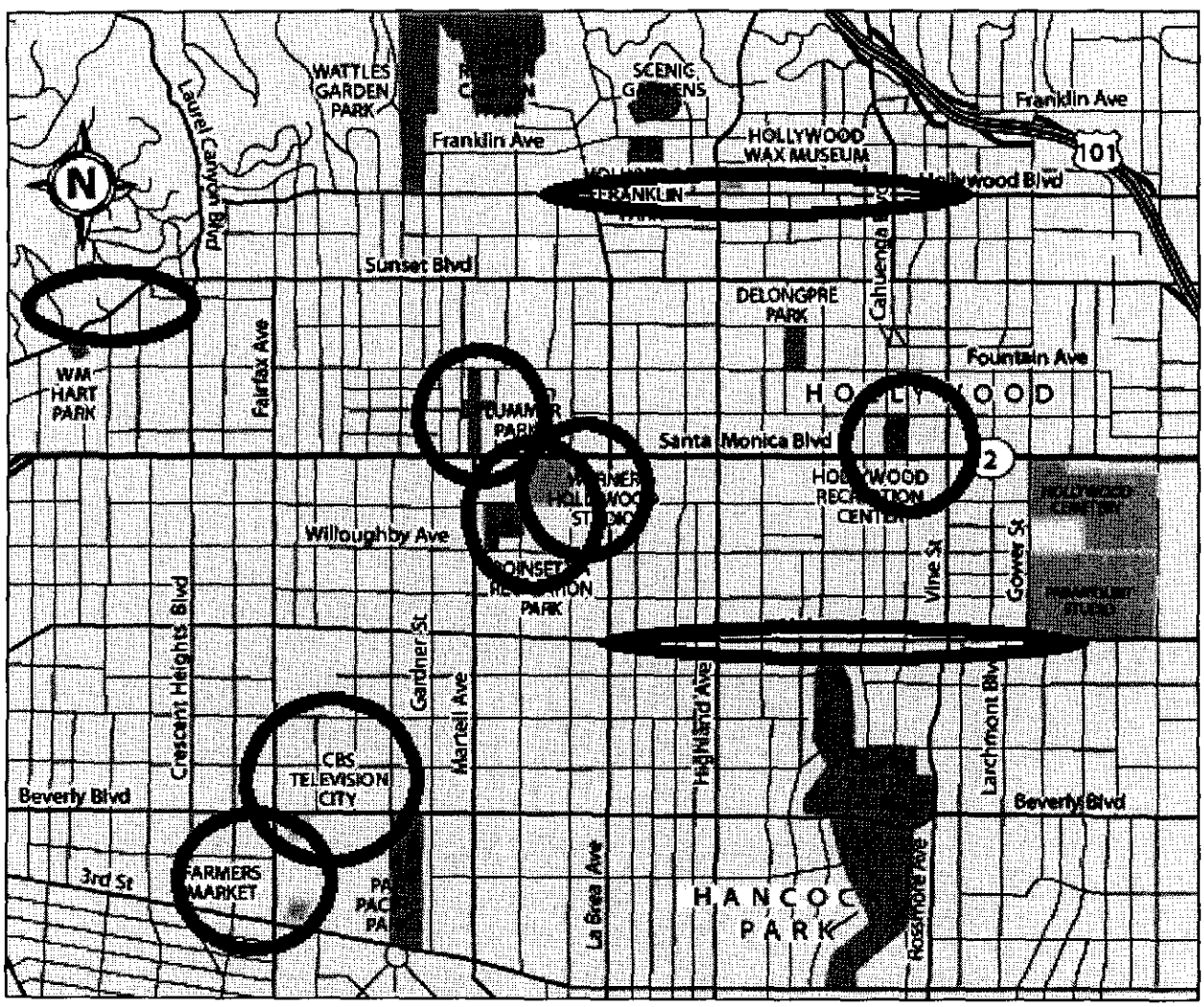
The communities of Westlake, Hollywood, Boyle Heights and South and Central Los Angeles have been especially hard hit.

African Americans and Latinos are killed in disproportionate numbers in pedestrian accidents and particularly in hit-and-run collisions. And older pedestrians, like Bosch, also suffer disproportionately. The analysis found that nearly 30% of pedestrians killed from 1993 through 2001 were 65 or older, even though that age group represents only 10% of the population.

GIS Tools - Traffic Patterns & Population Density

Geographic Information Systems (GIS) software can provide the means to create 'smart' maps that can be used to evaluate pedestrian traffic and demand hazardous conditions safe school access routes and other features than can be used to pinpoint needed improvements. Regional GIS maps that include population housing accident data and other traffic data and nodes can be used to determine high volume and high density traffic areas.

For example, in the illustration below, zones around each node indicate the typical pedestrian travel distance. Where nodes converge, pedestrian traffic multiplies as people cross within the overlap area in order to reach different destinations. The GIS determines not only the requirements for each destination, but also identifies areas where pedestrian traffic is higher than that at each individual node. However, many GIS criteria are not typically included in existing databases. These items include sidewalks, crosswalk locations, bike routes, medians and other pedestrian-friendly features and hazards.



TRAFFIC CALMING and OTHER MANAGEMENT TECHNIQUES

Tools that can be used to implement and improve facilities for pedestrian mobility:

- **Community Expectations and Standards**
  Political and community support is imperative to successfully implementing physical improvements in any community. Changes to the public right-of-way often impact multiple neighborhoods or political jurisdictions in which the population holds many disparate opinions. Additionally, many 'main streets' are state highways controlled and managed by Caltrans. Local, state and community coordination, education and involvement are imperative to successfully implementing infrastructure improvements.

- **Air Quality**
  Congest Management Programs, the California Environmental Quality Act (CEQA) and other state and federal legislation are useful tools to obtain funding and support for non-motorized transportation projects.

- **Routine Infrastructure Improvements**
  Pedestrian improvements can be implemented as part of routine infrastructure improvements such as street widening, re-construction, installation or replacement of utilities, new development or other projects that may require the replacement of existing sidewalks, curbs and lighting.

- **Zoning and Land Use Regulations**
  Growth should be supported by the existing investment in the transportation network, rather than requiring an expansion of the transportation network feeding into new development. This can be accomplished, in part, through municipal zoning regulations and General Plans to control development by grouping housing, services, and employment near transportation nodes. Zoned locations for neighborhood services such as bakeries, banks, dry cleaners, restaurants and other retail opportunities and businesses can encourage and promote a pedestrian mobile community. This will not only encourage pedestrian access from home to store to work, but can reduce traffic congestion and air pollution, increase property values, and contributes to a safe and cohesive community.

  Zoning ordinance's can also establish and define requirements for sidewalks such as setbacks (including requirements for additional public spaces on private property), sidewalk width, construction materials, curb cuts (required by ADA), landscaping and street furniture. The ordinance can also set limitations with regard to building aesthetics abutting the pedestrian-way, parking lots and driveway curb cuts that disrupt the pedestrian character of a street, and define requirements for pedestrian-scale signage, open space and public space.

- **Planned Unit Developments**
  Planned Unit Developments (PUDs) can further define aesthetic features and mobility for pedestrians by requiring specific design standards in new developments. The PUD allows for a specific mix of uses with compatible, or similar, development and design criteria but different land uses such as those described above. Standards in Puds may also include traffic calming and other traffic management techniques that are specific to the development, including:

  - Traffic Control Devices
  - Bump Outs or Curb Extensions
  - Cul-de-sacs
  - Roundabouts, Mini-Roundabouts (Traffic Circles)
  - Central Refuges: Traffic Islands and Medians and Raised Intersections
  - Textured crosswalks
  - Traffic Throttles (pinch points)
  - Road Humps, Speed Tables and Rumble Strips
  - Chicanes (street barriers that slow vehicles)

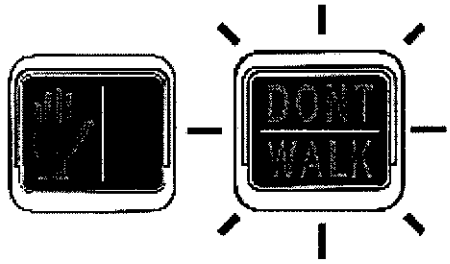
Boulevards
Boulevards provide an attractive pedestrian landscape while allowing for the free-flow of vehicular traffic. Street furniture, landscaping, wide textured or brick sidewalks provide a friendly and pleasant experience for pedestrians.

Features that should be included:

- Clearly marked crosswalks.
- Adequate crossing times at signalized intersections.
- Officer-assisted traffic control during peak hours or pedestrian travel.
- Traffic islands or centerline medians to provide a safe-zone for slower moving pedestrians.

Traffic Control Devices

In urban areas, pedestrian traffic control devices (Walk/Don't Walk indicators) are generally standard installations provided for the safety of pedestrians. However, there are variations in signage that may confuse pedestrians:

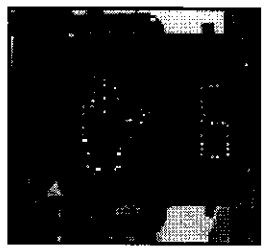


1) The ASSHTO Standard for pedestrian crosswalk signals specify an orange back-lit sign with a hand indicating "walk" and the words DON'T WALK when pedestrians should wait and stand clear of traffic.

2) Another variation of the sign is shown at right. "Don't Walk" is replaced by an internationally recognized symbol, as is the WALK indicator. This type of sign is more favorable to the English-language sign, particularly in areas frequented by tourists and visitors unfamiliar with the region or English language.

Pedestrian Traffic Control devices can be automatically controlled or manually actuated by the pedestrian. Manually operated signals are useful in low- to moderate-level pedestrian traffic areas where vehicular traffic is heavy. Street traffic is not delayed unless there is a pedestrian present. However, the installation of manually operated pedestrian crossing signal signs is usually accomplished by the most convenient means available. Standards are lacking and the location or use of the activation control (a button) is sometimes not apparent to the pedestrian. In particular, people unaccustomed to the location, such as tourists or other non-residents (or visitors from non-urban areas), may not be familiar with the concept unless clearly visible, explained and marked.

In areas with heavy foot traffic, such as shopping areas, hospitals, universities and other institutional settings, a countdown timer is useful to assist pedestrians (photo at left). The signal counts down the seconds remaining to cross the street, providing an indicator for pedestrians at the curb and mid-way across an intersection that clearly indicates the time remaining before the intersection should be cleared of foot traffic.



BARRIERS AND BOTTLENECKS

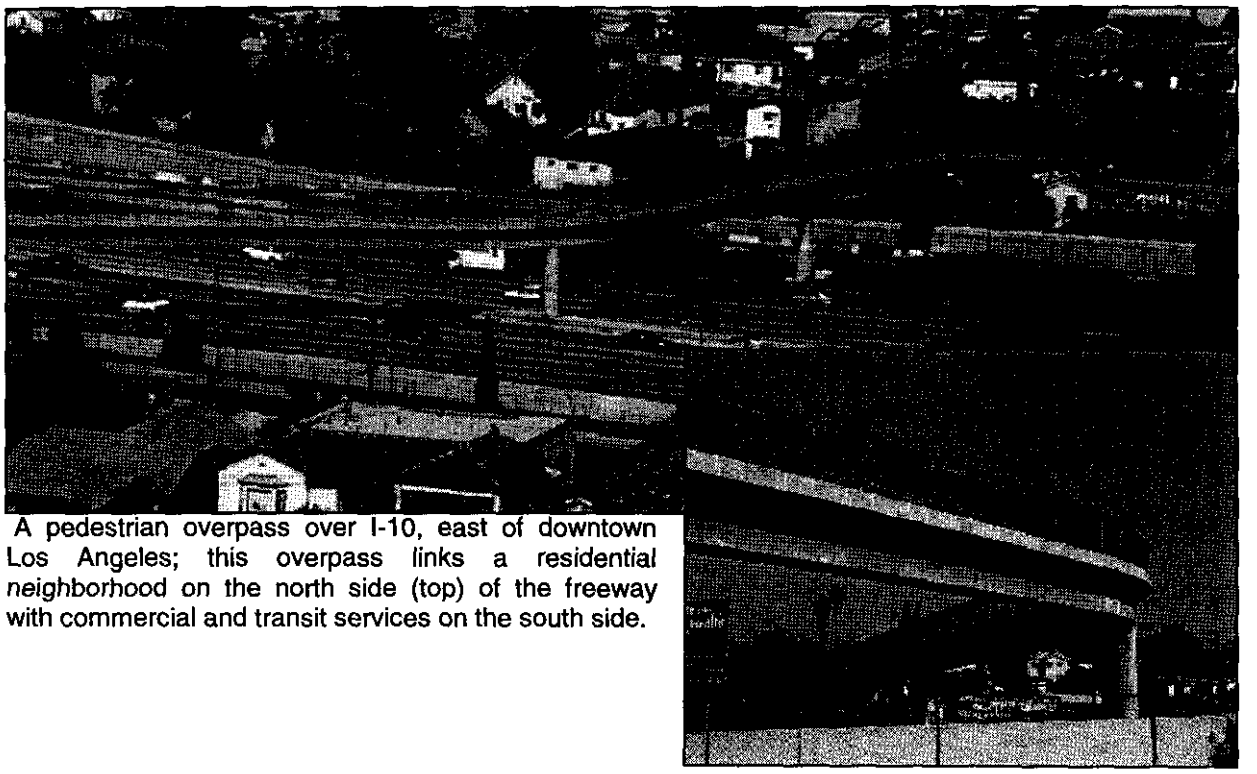
Allowing for the free-flow of vehicular traffic to reduce congestion and air pollution creates barriers for pedestrian travel. Following is a description of some of these barriers and strategies for handling individual issues.

Freeways and Freeway Interchanges

Freeway interchanges in urban areas create unique problems for pedestrians. Un-signalized interchanges on bridges and underpasses allow for the un-restricted flow of traffic onto the ramp from arterial streets. Insufficient traffic controls pose a hazard to pedestrians, who must gauge the speed and intent of vehicles at some distance from the crossing. The angled ramps also increase the crossing length for the pedestrian, further complicating the walker's judgement and safety.

Additionally, interchanges at underpasses require adequate lighting and good sidewalk visibility for pedestrian safety. Underpasses also require routine cleaning of bird droppings and trash to provide a healthy and attractive pedestrian environment and to minimize the potential to attract rodents.

Pedestrian bridges over freeways can also provide access between neighborhoods, transit facilities and other collector points that have been bisected by the freeway, where no cross street is available to provide a foot path.



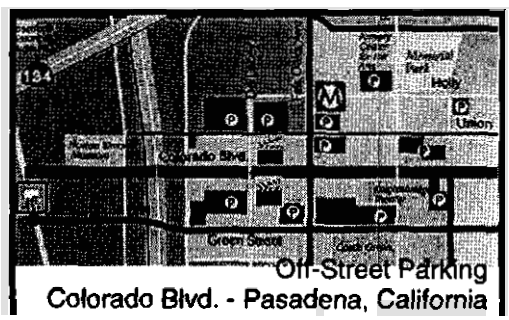
A pedestrian overpass over I-10, east of downtown Los Angeles; this overpass links a residential neighborhood on the north side (top) of the freeway with commercial and transit services on the south side.

Curb cuts, like these in Santa Monica, are required under the American with Disabilities Act.

Driveways and Curb Cuts

Commercial streets with off-street parking create pedestrian hazards and obstacles caused by frequent curb cuts and driveways across the pedestrian's path of movement. Essentially, there are five types of urban commercial areas:

- Streets without off-street parking (Melrose Avenue – Los Angeles).
- Streets with parking behind commercial arterials (see photo at right).
- Pedestrian Shopping malls (3rd St. Promenade - Santa Monica).
- Streets with individual driveways that provide access to each business' private parking area (Western Ave. – Los Angeles).



Off-Street Parking
Colorado Blvd. - Pasadena, California

Streets with major parking facilities, 'strip malls' or other types of multi-use driveways for collections of businesses within a convenient pedestrian range (Costa Mesa, 3rd St. Promenade in Santa Monica, downtown Burbank).

CURRENT CALIFORNIA LEGISLATIVE BILLS

There were six legislative bills before the California State Legislature in 2002 that affect pedestrians. The complete text, current status and history of these bills can be found at: www.leginfo.ca.gov/bilinfo.html (enter bill number in search box). Following is a summary of the intent of each of these bills:

SB 1262 – Smart Growth Transportation Incentive

(Torlakson - Died in committee: 11/30/02)

The legislation is applicable to counties with more than 200,000 residents and would expire December 31, 2009. The bill provides for not less than 10% of the funds available for regional improvements shall be used for:

1) County transportation incentive programs that reward local jurisdictions that promote new development programs that reduce traffic congestion.
2) Programs that promote new development programs that reduce traffic congestion.
3) Programs that provide a better balance of housing located near area employers.
4) Programs that promote new housing and other developments that are within walking distance of local schools, shops and businesses.

SB 1636 – Congestion Mgt. Programs - Infill Opportunity Zones (Figueroa)

(Figueroa - Enacted: 9/12/02)

The bill would define "Infill Opportunity Zones" as areas designated by a city or county as a target for new compact residential, retail, or commercial development within 1/3 mile of frequent mass transit services in counties with a population of over 400,000. These zones would be exempt from existing requirements to develop plans to reduce vehicle congestion, or to maintain a minimum standard for motor vehicle level of service in these areas.

SB 1555 – Neighborhood Traffic Safety Act of 2002 (Torlakson)

(Torlakson - Vetoed by Governor: 9/27/02 & died on File: 11/30/02)

The bill would levy an assessment of $5 to all persons convicted of a violation relating to the safe operation of a bicycle and a $5 penalty to any person with 2 or more points on his driving record, at the time of license renewal. The program will be administered by the Department of Health Services and the Department of Motor Vehicles to support and fund certain programs relating to the pedestrian and bicyclist safety and mobility on the basis of a competitive grant program. A Pedestrian and Bicyclist Mobility and Safety Fund would be created and administered for five years.

AB 1886 – School Pedestrian/Bicycle Safety Fund – School Zone Fines (Jackson)

(Jackson - Enacted: 12/16/02)

The bill would double traffic fines in school zones in Santa Barbara and Ventura Counties, and any city or school district within either county where the program is adopted. Money raised by the enhanced portion of the fine would be used for school-based pedestrian and bicycle safety programs.

AB 2707 – CEQA & Creation of Bicycle Lanes (Bogh/LaSuer)

(Died in committee: 11/30/02)

This bill would exempt requirements of the California Environmental Quality Act (CEQA) to prepare and certify an environmental impact report for any project that creates a bicycle lane by reducing the number of vehicle lanes on an existing roadway.

SB 1918 – Segway on the Sidewalk (Torlakson)

(Torlakson - Enacted: 9/27/02)

The Segway, referred to in legislation as an "electric personal assistive mobility device" (EPAMD), is a self-balancing, nontandom two-wheeled, that can turn in place, designed to transport one person, with an electric propulsion system designed to travel at less than 20 miles per hour, with a stopping distance of four feet.

This legislation proposes changes to existing law that will allow use of EPAMD's on public sidewalks. Currently, no motorized device except wheelchairs may be operated on public sidewalks. The legislation cites benefits including reduction in traffic congestion and air pollution, promotion of no-emission transportation, and increased mobility as reasons for supporting the bill.

The bill also requires safety mechanisms (lights, reflectors, braking system) and includes provisions that will allow local jurisdictions to regulate the time, place and manner of the operation of EPAMD's on sidewalks and bike paths.

The bill is not clear with regard to transporting EPAMD's on public transit, as is currently required for wheelchairs under the American with Disabilities Act.

The Segway Human Transporter is currently being used by various companies and the U.S. Postal Service and will be offered for sale to the general public in March 2003.

FUNDING SOURCES

Appendix A includes a summary of pedestrian and bicycle funding options provided by the FHWA. Additionally, pedestrian improvements can be funded as part of routine roadway improvement projects or as part of a major re-development project; this is a common practice. As streets are resurfaced, widened or otherwise improved (rehabilitation, sewers, drainage, etc.), sidewalks and other pedestrian improvements can be included as part of the overall project scope.

In commercial areas, sidewalk improvements can be funded as part of a merchant's association or chamber of commerce project. Pedestrian access is in the best interest of local merchants and it is justifiable and fair to expect that these merchants provide a share of the funding pie. There are a variety of funding opportunities that can be used:

- User Fees – Property owners pay their share for improvements from which they directly receive a benefit.

- Voluntary Programs - Homeowners, businesses or associations contribute to the cost for improvements of public property (generally ROW) adjacent to their property.

- Pay Per Improvement – Property owners are charged a fee for improved service when improvements are constructed. For example, sewer hook-up charges from a main line.

NEXT STEPS

This paper will be presented to the Regional Transportation Demand Management Task Force for review and approval in August 2002 as the second and final chapter of work element 02-0049 – Non-Motorized Transportation. The first chapter of this work element provided a *Bicycle Issues and Strategies* paper for commuter bicycle transportation and updated set of GIS maps identifying bikeways in the 6-county SCAG region.

The *Bikeways & Pedestrian Issues and Strategies* papers will be used by SCAG in the development of policy, planning assumptions, strategic investments, a financial plan and other components of the 2004 Regional Transportation Plan (RTP).

No later than June 2003, all proposals for the 2004 RTP will be submitted to SCAG's Transportation and Communication Committee and the Regional Council for approval.

WHAT IS SCAG?

The Southern California Association of Governments (SCAG) is the Metropolitan Planning Organization (MPO) and Council of Governments (COG) for six Southern California counties (see map), encompassing over 38,000 square miles, 184 cities and 17 million people. More information about SCAG can be found at www.scag.ca.gov.

WHAT IS A REGIONAL TRANSPORTATION PLAN?

The RTP is updated every three years by SCAG and includes an extensive public outreach program and "enjoys regional consensus through its flexibility and recognition of the unique nature of the region." The RTP covers at least a 20-year period, as required by state and/or federal requirements. "Transportation investments in the SCAG Region, which receive federal transportation funds, must be consistent with the RTP and must be included in the Regional Transportation Improvement Program (RTIP) when ready for funding. The RTIP complements the corresponding years of the RTP and must be updated every two years for funding. SCAG's RTIP is a six-year program."

ACRONYMS

SCAG.....Southern California Association of Governments
RTP.....Regional Transportation Plan
RTIP.....Regional Transportation Improvement Program
COG.....Council of Governments
MPO.....Metropolitan Planning Organization
RTDM.....Regional Transportation Demand Management (a SCAG Task Force)
GIS.....Geographic Information System (a type of intelligent digital mapping)
AASHTO American Association of State Highway and Transportation Officials

PUBLIC OUTREACH

Due to the local nature of pedestrian design and improvement projects, the public outreach program has been designed to facilitate involvement from citizens, planners, elected officials and interested parties at the municipal level. Additionally, regional advocacy groups have been contacted to ensure a balanced and complete perspective.

A draft version of this paper was provided to the following for comment. Comments have been incorporated into this final paper.

- SCAG Bicycle Working Group
- Art Cueto, LAMTA (LA County COG: 8 sub-regions)
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SELECTED LITERATURE SEARCH

- Southern California Association of Governments Pedestrian and Trails Plan (Document #497) - Los Angeles, San Bernardino and Ventura Counties, By Marc A. Futterman & Associates, 04/97
- City of Los Angeles, General Plan Transportation Element, Chapter V, Map D Non-Motorized Transportation (Centers/Districts with potential pedestrian priority street segments). www.lacity.org/PLN/Trans-Element/te-maps/mapd.gif
- City of Los Angeles, General Plan Transportation Element, Chapter VI – Street Designations and Standards www.lacity.org/PLN/Trans-Element/TE/ch6.pdf
- City of Seattle: Bicycle and Pedestrian Elements of a Transportation Plan www.bikeplan.com/apa.htm
- City of Seattle: Bicycle and Pedestrian Planning under TEA-21 www.bikeplan.com/apa.htm
- AmericaWalks – Report on Achievements in 1999 & 2000 from America Walks and Member Groups. www.americawalks.org/membership/report2000.htm
- National Center for Bicycling & Walking: The Economic Benefits of Bicycle- and Pedestrian-based *Tourism, and the Economic Impacts of Trail Development.* www.bikefed.org/economic_impact.htm
- "Police cracking down on biking on sidewalk," Chicago Sun-Times 8/12/02 - By Julie Patel.
- *SF Bay Area Pedestrian Education Group. www.baypeds.org/index1.html*
- Traffic Calming: State of the Practice, Institute of Traffic Engineers/FHWA, August 1999 www.ite.org/traffic/tcstate.htm#tcsop
- State of the Art: Residential Traffic Management, FHWA, 1980 www.ite.org/traffic/tcstate.htm#sartm
- Canadian Guide to Neighbourhood Traffic Calming, TAC/CITE, December 1998 www.ite.org/traffic/tcstate.htm#cgntc
- City of Los Angeles Plan: CHAPTER VI - STREET DESIGNATIONS AND STANDARDS.
- Funding Sources for Bicycle and Pedestrian Projects www.fhwa.dot.gov/environment/bikeped/BP-Broch.htm#funding
- Case Study No. 19: *Traffic Calming, Auto-Restricted Zones and Other Traffic Management Techniques- Their Effects on Bicycling and Pedestrians,* National Bicycling And Walking Study U.S. Department of Transportation Federal Highway Administration. Publication No. FHWA-PD-93-028.
- US Dept. of Transportation, Federal Highway Administration: Bicycle and Pedestrian Safety Program safety.fhwa.dot.gov/programs/ped_bike.htm.
- *FHWA Bicycle and Pedestrian Program http://www.fhwa.dot.gov//////environment//bikeped/index.htm*
- Town of Tiburon, California Staff Report: Status Of The Tiburon Bicycle And Pedestrian Master Plan. www.tiburon.org/Government/Commissions/Planning%20Comm/PC%20Staff%20Reports/pc101001bicycleplan.htm
- FHWA Pedestrian & Bicycle Safety Research Page www.tfhrc.gov/safety/pedbike/pedbike.htm
- Surface Transportation Policy Planning Project (STPP - California): "Pedestrian Safety." www.transact.org/Ca/ped_safety2.htm
- "GIS Tools for Improving Bicycle and Pedestrian Safety," US Department of Transportation, Federal Highway Administration, July 2000.
- Links to Pedestrian Advocacy: http://www.carfree.com/link/fped.html

APPENDIX A: FUNDING SOURCES FOR BICYCLE AND PEDESTRIAN PROJECTS

This Appendix provided by the Federal Highway Administration (FHWA) web site at www.fhwa.dot.gov/environment/bikeped/BPBroch.htm#funding (November 6, 2001).

Bicycle and pedestrian projects are broadly eligible for funding from almost all the major Federal-aid highway, transit, safety, and other programs. Bicycle projects must be "principally for transportation, rather than recreation, purposes" and must be designed and located pursuant to the transportation plans required of States and Metropolitan Planning Organizations.

Federal-aid Highway Program:
National Highway System funds may be used to construct bicycle transportation facilities and pedestrian walkways on land adjacent to any highway on the National Highway System, including Interstate highways.

Surface Transportation Program (STP) funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use and walking. TEA-21 adds "the modification of public sidewalks to comply with the Americans with Disabilities Act" as an activity that is specifically eligible for the use of these funds.

Ten percent of each State's annual STP funds are set-aside for Transportation Enhancement Activities (TEAs). The law provides a specific list of activities that are eligible TEAs and this includes "provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists," and the "preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails)."

Another 10 percent of each State's STP funds are set-aside for the Hazard Elimination and Railway-Highway Crossing programs, which address bicycle and pedestrian safety issues. Each State is required to implement a Hazard Elimination Program to identify and correct locations, which may constitute a danger to motorists, bicyclists, and pedestrians. Funds may be used for activities including a survey of hazardous locations and for projects on any publicly owned bicycle or pedestrian pathway or trail, or any safety-related traffic calming measure. Improvements to railway-highway crossings "shall take into account bicycle safety."

Congestion Mitigation and Air Quality Improvement Program funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use.

Recreational Trails Program funds may be used for all kinds of trail projects. Of the funds apportioned to a State, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses (any combination).

Provisions for pedestrians and bicyclists are eligible under the various categories of the Federal Lands Highway Program in conjunction with roads, highways, and parkways. Priority for funding projects is determined by the appropriate Federal Land Agency or Tribal government.

National Scenic Byways Program funds may be used for "construction along a scenic byway of a facility for pedestrians and bicyclists."

Job Access and Reverse Commute Grants are available to support projects, including bicycle-related services, designed to transport welfare recipients and eligible low-income individuals to and from employment.

High Priority Projects and Designated Transportation Enhancement Activities identified by TEA-21 include numerous bicycle, pedestrian, trail, and traffic calming projects in communities throughout the country.

Federal Transit Program
Title 49 U.S.C. (as amended by TEA-21) allows the Urbanized Area Formula Grants, Capital Investment Grants and Loans, and Formula Program for Other than Urbanized Area transit funds to be used for improving bicycle and pedestrian access to transit facilities and vehicles. Eligible activities include investments in "pedestrian and bicycle access to a mass transportation facility" that establishes or enhances coordination between mass transportation and other transportation.

TEA-21 also created a Transit Enhancement Activity program with a one- percent set-aside of Urbanized Area Formula Grant funds designated for, among other things, pedestrian access and walkways, and "bicycle access, including bicycle storage facilities and installing equipment for transporting bicycles on mass transportation vehicles".

Highway Safety Programs
Pedestrian and bicyclist safety remains priority areas for State and Community Highway Safety Grants funded by the Section 402 formula grant program. A State is eligible for these grants by submitting a Performance plan (establishing goals and performance measures for improving highway safety) and a Highway Safety Plan (describing activities to achieve those goals).

Research, development, demonstrations and training to improve highway safety (including bicycle and pedestrian safety) is carried out under the Highway Safety Research and Development (Section 403) program.

Federal/State Matching Requirements
In general, the Federal share of the costs of transportation projects is 80 percent with a 20 percent State or local match. However, there are a number of exceptions to this rule.

- Federal Lands Highway projects and Section 402 Highway Safety funds are 100 percent Federally funded.
- Bicycle-related Transit Enhancement Activities are 95 percent Federally funded.
- Hazard elimination projects are 90 percent Federally funded. Bicycle-related transit projects (other than Transit Enhancement Activities) may be up to 90 percent Federally funded.
- Individual Transportation Enhancement Activity projects under the STP can have a match higher or lower than 80 percent. However, the overall Federal share of each State's Transportation Enhancement Program must be 80 percent.
- States with higher percentages of Federal Lands have higher Federal shares calculated in proportion to their percentage of Federal lands.

- The State and/or local funds used to match Federal-aid highway projects may include in-kind contributions (such as donations). Funds from other Federal programs may also be used to match Transportation Enhancement, Scenic Byways, and Recreational Trails program funds. A Federal agency project sponsor may provide matching funds to Recreational Trails funds provided the Federal share does not exceed 95 percent.

Planning for Bicycling and Walking
States and Metropolitan Planning Organizations (a planning agency established for each urbanized area of more than 50,000 population) are required carry out a continuing, comprehensive, and cooperative transportation planning process that results in two products.

1. A long-range (20-year) transportation plan provides for the development and integrated management and operation of transportation systems and facilities, including pedestrian walkways and bicycle transportation facilities. Both State and MPO plans will consider projects and strategies to increase the safety and security of the transportation system for non-motorized users.

2. A Transportation Improvement Program (TIP) contains a list of proposed federally supported projects to be carried out over the next three years. Projects that appear in the TIP should be consistent with the long-range plan.

The transportation planning process is carried out with the active and on-going involvement of the public, affected public agencies, and transportation providers.

Section 1202 of TEA-21 says that bicyclists and pedestrians shall be given due consideration in the planning process (including the development of both the plan and TIP) and that bicycle facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities except where bicycle use and walking are not permitted. Transportation plans and projects shall also consider safety and contiguous routes for bicyclists and pedestrians. Safety considerations may include the installation of audible traffic signals and signs at street crossings.

Policy and Program Provisions

State Bicycle and Pedestrian Coordinators
Each State is required to fund a Bicycle and Pedestrian Coordinator position in its State Department of Transportation to promote and facilitate the increased use of non-motorized transportation, including developing facilities for the use of pedestrians and bicyclists and public educational, promotional, and safety programs for using such facilities. Funds such as the CMAQ or STP may be used for the Federal share of the cost of these positions. In most States, the Coordinator position is a full-time position with sufficient responsibility to deal effectively with other agencies, State offices, and divisions within the State DOT.

Protection of Non-motorized Transportation Traffic
The Secretary shall not approve any project or take any regulatory action that will result in the severance of an existing major route, or have an adverse impact on the safety of non-motorized transportation traffic and light motorcycles, unless such project or regulatory action provides for a reasonable alternate route or such a route already exists.

Users of a Bicycle and Pedestrian Facility
Motorized vehicles are not permitted on trails and pedestrian walkways except for maintenance purposes, motorized wheelchairs, and State or local regulations permit--snowmobiles and electric bicycles. Electric bicycles are defined for the purposes of this Act as a bicycle or tricycle with a low-powered electric motor weighing less than 100 pounds with a top motor-powered speed not in excess of 20 miles per hour.

Facility Design Guidance
The design of bicycle and pedestrian facilities is determined by State and local design standards and practices, many of which are based on publications of the American Association of State Highway and Transportation Officials (AASHTO) such as the *Guide to the Development of Bicycle Facilities* and *A Policy on Geometric Design of Streets and Highways.*

TEA-21 calls on the Federal Highway Administration to develop guidance on the various approaches to accommodating bicycles and pedestrian travel, in cooperation with AASHTO, the Institute of Transportation Engineers, and other interested organizations. The guidance, to be completed by December 1999, will include recommendations on amending and updating AASHTO policies relating to highway and street design standards to accommodate bicyclists and pedestrians.

Bridges
When a highway bridge deck-on which bicyclists are permitted or may operate at each end of the bridge-is being replaced or rehabilitated with Federal funds, safe accommodation of bicycles is required unless the Secretary of Transportation determines that this cannot be done at a reasonable cost.
Railway-Highway Crossings
When improvements to at-grade railway-highway crossings are being considered, bicycle safety must be taken into account.

Research, Special Studies, and Reports
TEA-21 continues funding for highway safety research (Section 403), the National Cooperative Highway Research Program (NCHRP) and Transit Cooperative Research program (TCRP), all of which have funded research into pedestrian and bicycle issues. In addition, the legislation creates a number of new research areas, special studies, reports, and grant programs including:

- A new Surface Transportation-Environment Cooperative Research Program is established to evaluate transportation control measures, improve understanding of transportation demand factors, and develop performance indicators that will facilitate the analysis of transportation alternatives.

- $500,000 is made available for the development of a national bicycle safety education curriculum.

- $500,000 per year is made available for grants to a national not for profit organization engaged in promoting bicycle and pedestrian safety to operate a national clearinghouse, develop informational and education programs, and disseminate techniques and strategies for improving bicycle and pedestrian safety.

- $200,000 is made available for a study of the safety issues attendant to the transportation of school children to and from school and school-related activities by various transportation modes. TRB is identified as the manager of the study, which must be done within 12 months and the panel conducting the study must include bicycling organizations. (Section 4030)

- A study of transit needs in National Parks and related public lands includes a requirement that the study assess the feasibility of alternative transportation modes. (Section 3039)

- The Bureau of Transportation Statistics is charged with establishing and maintaining a transportation database for all modes of transportation that will include "information on the volumes and patterns of movement of people, including local, interregional, and international movements, by all modes of transportation (including bicycle and pedestrian modes) and intermodal combinations, by all relevant classifications. (Section 5109).

Conclusion
Bicycling and walking are important elements of an integrated, intermodal transportation system. Constructing sidewalks, installing bicycle parking at transit, teaching children to ride and walk safely, installing curb cuts and ramps for wheelchairs, striping bike lanes and building trails all contribute to our national transportation goals of safety, mobility, economic growth and trade, enhancement of communities and the natural environment, and national security.

All of these activities, and many more, are eligible for funding as part of the Federal-aid Highway Program. The Transportation Equity Act for the 21st Century confirms the place of bicycling and walking in the mainstream of transportation decision-making at the State and local level and enables communities to encourage more people to bicycle and walk safely.

For More Information:

1. The Transportation Equity Act for the 21st Century, PL-105-550. Available from the Government Printing Office or on-line at www.fhwa.dot.gov/legsregs/legislat.html

2. Title 23, United States Code. Available from the Government Printing Office or your local library system. www.fhwa.dot.gov/legsregs/legislat.html

3. Code of Federal Regulations, Part 652. Available from the Government Printing Office or your local library system.

APPENDIX B: A Summary of the Segway Issue

[Reproduced: source to be identified in final document]

The much-ballyhooed Segway human transporter is a self-balancing, motorized conveyance that is unique in the world of transportation. But marketing concerns are only part of the reason why the manufacturer is particular about what to call it. Segway LLC of New Hampshire doesn't want you to confuse its invention with a scooter or an electric cart because such vehicles are prohibited from public sidewalks in most states. In fact, the only motorized vehicles allowed on sidewalks in California are wheelchairs and carts used by the disabled.

Segway hopes to change that. The firm has sponsored legislation in Sacramento to rewrite the definition of a pedestrian to include people using the Segway transporter, thus allowing the device to roll on all public sidewalks in the state.

The state Senate already has approved the bill, and a final vote in the Assembly is expected next month. Similar legislation sponsored by Segway in 30 other states has already been adopted.

But many pedestrian activists and advocates for the blind don't count themselves among the bill's supporters. They worry that the 65-pound transporter, with a top cruising speed of 12.5 mph, will endanger senior citizens, children and other pedestrians when it goes on the market sometime next year.

"That could kill somebody," said Deborah Murphy, founder of L.A. Walks, a pedestrian advocacy group in Los Angeles.

In addition to the concerns over pedestrian safety, the Segway transporter has also raised questions about who or what should have access to public sidewalks.

Created by inventor Dean Kamen, the Segway looks like a push-style lawnmower. But it is equipped with 10 computers and five gyroscopes to keep a single rider balanced on two side-by-side wheels.

It has no brakes or accelerator. A rider, standing on the transporter platform, simply shifts forward and silently glides ahead.

The transporter has already made appearances on NBC's "Tonight Show" and ABC's "Good Morning America" and at Disney World's Epcot Center. It is in use by the U.S. Postal Service, the National Park Service and at several law enforcement agencies nationwide.

It is expected to go on sale to the public next year, with a price tag starting at about $3,000.

Senate Bill 1918 would allow an "electric assistive mobility device" with the Segway's specifications on all sidewalks, without requiring the rider to have a license or a helmet. If the bill is adopted, cities can impose limits on the time and place where the devices are used.

The biggest concern for critics is that the machine can operate at three to four times the speed of an average pedestrian. At that velocity, critics say, the Segway should be relegated to bike lanes or the street.

Catherine Skivers, president of the California Council for the Blind, is concerned that the device could be dangerous to visually impaired pedestrians who won't hear the near-silent electric transporter approaching.

Segway officials say the transporter is too small and slow for streets. Besides, they say, the device has been thoroughly tested, and it continues to be evaluated by government agencies throughout the country.

But the testing has not been without a few bumps. In May, a member of a business district patrol unit in Atlanta toppled from a Segway going up a driveway onto a sidewalk, injuring his knee.

Segway officials point out that--as is the case with bicycles, scooters and skateboards--the rider is ultimately

responsible for operating the device safely.

"Technology does not replace common sense," said Matt Dailida, manager of state government affairs for Segway.

But some critics say that even when properly used, the machine can be dangerous in an innocent mishap.

David Lawrence, director of the Center for Injury Prevention Policy and Practice at San Diego State University, said a collision between pedestrians is usually harmless. But, he asked, what happens if one of those pedestrians is on a Segway?

"If someone bumps into a Segway operator, that same temporary loss of balance could send a speeding vehicle careening into people walking nearby," Lawrence said.

Dailida said the transporter--when traveling at 9 mph--takes about four feet to stop. And if a rider falls off, it stops automatically, he added.

But accidents are inevitable, and a Washington, D.C., law firm is already preparing to take advantage of that fact. The firm, called USA Immigration Law Center, has announced that it is preparing to specialize in Segway injury cases.

"We believe that the Segway HT [human transporter] is a legal nightmare and will be the basis for many lawsuits, both from the corporate and consumer side," the law firm says on its Web site.

Dailida said he had not heard of the firm but added: "It's very premature for any group like that to prepare for legal suits against our company."

In Los Angeles County, liability issues have prompted officials at the Metropolitan Transportation Authority to reconsider using the Segway transporter in a pilot project intended to promote alternative transportation around transit centers. The project, which was scheduled to start in April, is on hold pending further study.

But such setbacks have not discouraged Segway, which invested $100 million in creating the human transporter. The company also spent $49,000 on a Sacramento lobbying firm to push the legislation submitted by Sen. Tom Torlakson (D-Antioch).

Michael Smith, president of Walk San Francisco, a Bay Area pedestrian advocacy group, suggested that Segway had used its money and influence to get the Senate to vote 30 to 1 in support of the bill.

"Our sidewalks are not for sale," he said.

Torlakson said he has taken no contributions from Segway but championed the legislation because he is interested in promoting alternative transportation. "It's an incredible invention," he said. "Let's give it a chance."

Besides the safety concerns, critics wonder whether the Segway transporter is needed. Given the problems America has with obesity and diabetes, they ask why more people don't use old-fashioned foot power to get around.

Said Smith: "What the Segway would do is automate one of the oldest forms of exercise: walking."

It has two wheels and a handlebar, but don't call it a scooter.

It is propelled by an electric motor, but don't confuse it with a golf cart.

The much-ballyhooed Segway human transporter is a self-balancing, motorized conveyance that is unique in the world of transportation. But marketing concerns are only part of the reason why the manufacturer is particular about what to call it. Segway LLC of New Hampshire doesn't want you to confuse its invention with a scooter or an electric

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Non-Motorized Transportation

Pedestrian Issues

April 3, 2003

Southern California Association of Governments
Non-motorized Transportation (NCC)

Transit Trips to Work

by U.S. Workers travelling to Work

Pedestrian Issues

People's willingness to walk to a transit station drops off rapidly with distances beyond 1/2 mile (4 blocks).

Pedestrian access & use of public transit

- 13% of those living within 1/4 mile.
- 8% of those living within 1/4 to 1/2 mile.
- 4% of those living within 1/2 to 2 miles.

April 3, 2003

Southern California Association of Governments
Non-motorized Transportation (NCC)

Key Issues

Pedestrian Issues

- Pedestrian safety
- Access to schools & public facilities where children are present
- Americans with Disabilities Act
- Convenience & aesthetics

April 3, 2003

Southern California Association of Governments
Non-motorized Transportation (NCC)

Effective Planning

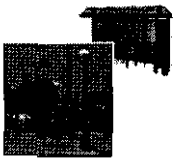
Pedestrian Issues

- Access to and from Park & Ride Facilities
- Traffic calming and traffic management
- Traffic Control Devices
- Barriers and Bottlenecks
  (freeways, ramps, parking structures)

Physical Improvements

Pedestrian Issues

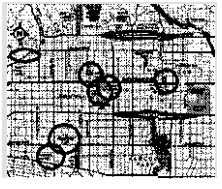
- Infrastructure improvements and improved pedestrian movement
- Streetscape and Boulevard Improvements



Planning Tools

Pedestrian Issues

- Collection of pedestrian-related accident data
- GIS and mapping tools
- Zoning, Land Use & Permit Conditions



2002 State Legislation

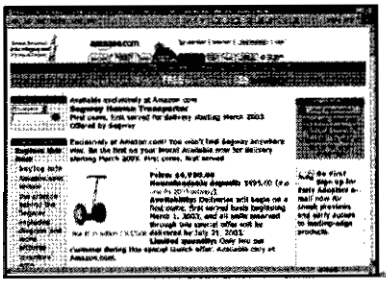
Pedestrian Issues

- Smart Growth Transportation Incentive
  (SB 1282 - Torlakson - Died in committee: 11/30/02)
- Neighborhood Traffic Safety Act of 2002
  (SB 1555 – Torlakson - Vetoed by Governor: 9/27/02 & died on File: 11/30/02)
- CEQA & Creation of Bicycle Lanes
  (AB 2707 – Bogh/LaSuer - Died in committee: 11/30/02)
- Congestion Mgt. Programs - Infill Opportunity Zones
  (SB 1636 – Figueroa - Enacted: 9/12/02)
- School Pedestrian/Bicycle Safety Fund – School Fines
  (AB 1696 – Jackson - Enacted: 12/16/02)
- Segway on the Sidewalk
  (SB 1918 – Torlakson - Enacted: 9/27/02)

April 3, 2003

Segway Human Transporter

Pedestrian Issues



April 3, 2003

Recommended Actions

Pedestrian Issues

- Define accident locations, causes and other trends to determine improvement needs.
- Coordinate pedestrian mobility planning efforts with SCAG's Growth Visioning program.
- Review, evaluate and form opinions on legislation.
- Evaluate funding availability.
  - Apply for planning funds
  - Circulate funding sources & availability

April 3, 2003

EXECUTIVE SUMMARY & COMMENTS: BICYCLE WORKING GROUP

RTDM Task Force: Non-Motorized Transportation (02-0049) – Bicycle and Pedestrian Study

Bicycle Working Group MEMBERS

Dan Gutierrez	Long Beach Cyclists	Dan.Gutierrez@charter.net	562-244-4145
Lynne Goldsmith	LACMTA	GoldsmithL@mta.net	213-922-3068
Don Harvey	Orange County Bicycle Coalition	HarveyDonW@aol.com	714-288-9130
Rosa Lopez	Imperial Valley Association of Governments	ivag@imperialcounty.net	760-482-4290
Kent Strumpell	LA County Bicycle Coalition	KentStrum@aol.com	310-215-0144
Lance Christiansen	Ventura County Bicycle Coalition	LanceC@std.teradyne.com	818-874-7450
Michelle Mowery	City of LA Bicycle Coordinator (LADOT)	MMowery@dot.lacity.org	213-580-1199
Leslie Bullock	Bicycle Commuter Coalition of the Inland Empire	LBullock@linkline.net (?)	909-789-9120

GOALS & OBJECTIVES (FY:01-02)

The Goals and objectives of the Bicycle Working Group for FY: 01-02 has been successfully completed on schedule. Bicycle Transportation Issues and Bicycle Strategies Working Papers were submitted to the Working Group on January 10, 2002 and to the RTDM Task Force on January 17, 2002. Public comment was also received on January 17th and in correspondence. These documents summarize the goals and accomplishments of the Bicycle Working Group, and issues/objectives for bicycle commuting planning and improvement strategies. GIS-format Bicycle Network Working Maps for each county in the SCAG region were also presented at the aforementioned meetings. Additional information on municipal bicycle networks continues to arrive at SCAG from various agencies and communities in the region.

The RTDM Task Force will review recommendations of the Bicycle Working Group and select strategies will be referred to the RCP TAC by June 2002.

The final document and comments was submitted to the RTDM Task Force on February 21, 2002. A summary of the BWG Goals and Issues follows:

GOALS

1) Identify existing bicycle routes and prepare working maps (GIS).
2) Consider the potential significance of bicycling as a means of commuting to work.
3) Develop consensus on bicycle commuting planning and improvement strategies.
4) Convey the importance of non-utilitarian/non-work trips to the RTDM Task Force.

EXECUTIVE SUMMARY & COMMENTS: BICYCLE WORKING GROUP

RTDM Task Force: Non-Motorized Transportation (02-0049) – Bicycle and Pedestrian Study

ISSUES & STRATEGIES SUMMARIZED

1) **IDENTIFY COMMUTER CORRIDORS:** Identify a list of candidate commuter corridors for the purpose of future regional bikeways planning with an emphasis on providing links between existing systems.

2) **INTERMODAL CONNECTIONS:** Conduct a region-wide assessment of intermodal connections between bicycles and transit systems, including storage at stations and access to buses, rail. Equip transit systems for bicycles, including at peak commute periods.

3) **QUANTIFY FUNDING NEEDS:** This may be difficult as funding is primarily addressed via municipal and county bicycle master plans (California General Plans do not mandate consideration of bicycle and pedestrian facilities).

4) **IDENTIFY FUNDING SOURCES:** Identify funding for planning, development and construction. Support current planning efforts and advocate increased state funding.

5) **IDENTIFY COMPREHENSIVE BICYCLE USE STATISTICS:** Collect user demographics, travel patterns/corridors, roadway/bikeway condition and maintenance practices, bicycle-related traffic incidents, suregional improvement projects, latent demand (use if conditions were conducive to bicycle commuting on a regular basis). Provide a comprehensive integrated system for storage and retrieval of data.

6) **ADVOCATE A MULTI-MODAL MINDSET** among planning, programming and design staff to facilitate the integration of bicycling (and pedestrian facilities) into the mainstream of transportation planning. This will be accomplished via uniform, methodical integration into subregional and regional transportation planning processes through on-going programs, staff training and analytical tools.

7) **IMPROVE ARTERIAL STREETS ACCESS**; particularly during peak travel hours.

8) **IDENTIFY AREAS WITH SAFETY DEFICIENCIES** including hot spots, areas requiring maintenance and pavement surface improvements.

9) **INTEGRATE BICYCLE PLANNING** into the overall planning process and develop/support methodologies to analyze bicycling in the traffic modeling process.

10) **RESOLVE CONFLICT BETWEEN MODE SPLIT/LATENT DEMAND:** Mode split indicates bicycle commuter ridership to be 1% or total trips, thereby making it difficult to justify funding. Bicycle advocates believe there are inadequate methods of determining the bicycle mode split and that there is latent demand that could be met with improved accessibility.

11) **INCORPORATE BICYCLE USE IN NEW LAND USE DEVELOPMENTS.**

12) **IDENTIFY AND EVALUATE TRAFFIC MANAGEMENT PLANS/BICYCLE USE:** Traffic System Management, Traffic Calming, and other new and innovative strategies that may pose obstacles to bicycles.

13) **PROMOTE HOV PROJECTS AND IMPROVEMENTS.** Work to alter the mindset that encourages the predominance of single occupancy vehicle travel.

EXECUTIVE SUMMARY & COMMENTS: BICYCLE WORKING GROUP

RTDM Task Force: Non-Motorized Transportation (02-0049) – Bicycle and Pedestrian Study

PUBLIC COMMENT

Comments from Leslie Bullock, Bicycle Commuter Coalition of the Inland Empire

- See attached letter to Hon. Lee Ann Garcia, Jan. 15, 2002.

Comments from Kent Strumpell, LA County Bicycle Coalition:

- Bicycle routes should provide access to all destinations that motor vehicles access.
- The region should set a goal that all arterials provide accommodations for bicycle transportation (where feasible) during construction, maintenance and resurfacing projects. Improvement projects provide an opportunity to integrate and incorporate bicycle accommodations.
- Caltrans has a very broad, inclusive regional bicycle policy; the region should adopt a similar policy.

Comments from Dan Gutierrez, Long Beach Cyclists:

- Most bicycle trips are less than 5 miles yet the region's bikeways grid is in 2-5 miles in size.
- California State law grants bicycle riders the same rights and responsibilities as the owners of vehicles on public streets, and grants bicyclists access to all non-controlled roads (all except freeways).
- Bicyclists need to reach the same arterials and destinations that motorists do. The notion of a commuter bikeways network does not correlate with the reality of the way bicyclists use roads.
- The ability to share the outside travel lane with motorists is critical. Improvements for bicycle lanes, striping and pavement improvements along the outside travel lane should be considered when roads are improved, where possible within the ROW. Arterials are now part of the bicycle network and should be improved over time.
- The inability to detect bicycles in left turn pockets where detected loops are used is a safety hazard; intersection improvements should be sensitive to bicycle needs.
- Streetscapes with foliage, trees and landscaped islands at intersections create a safety hazard for bicyclists due to limited visibility.

EXECUTIVE SUMMARY & COMMENTS: BICYCLE WORKING GROUP

RTDM Task Force: Non-Motorized Transportation (02-0049) – Bicycle and Pedestrian Study

Comments from Lance Christiansen, Ventura County Bicycle Coalition:

- When roads are improved or re-striped, bike lanes should be taken into consideration and bike lane accommodations should be implemented where feasible.

- Negotiating streets safely requires knowledge of urban bicycle riding. Education programs should be included in the recommendations for this study.

- Public outreach is needed to educate and promote bicycling.

Comments from various RTDM Task Force Members:

- Local communities and bicycle groups often initiate public outreach efforts.

- The Auto Club provides bicycle safety and education through the school system in 13 Southern California counties.

- One issue is to determine which issues are best handled through a regional approach and which are best handled through a local community or County Transportation Commission.

- Was there any discussion of how bicyclists could help shoulder some of the costs for providing services on public transportation? (This is one of the issues recommended for further study).

- Traffic calming measures have a much larger impact on land use planning, livable cities, quality of life than do bicycle lanes.

RTDM Regional Bicycle Planning Working Group

Bicycle Transportation Issues

INTRODUCTION

SCAG's Regional Council created the Regional Transportation Demand Management (RTDM) Task Force of the Transportation and Communications Committee (TCC) to facilitate discussion and interaction, on traditional and non-traditional TDM issues, among SCAG member cities/counties, transit operators, county transportation commissions, CALTRANS and the Federal funding agencies. The overall work of the Task Force will encompass the current policies and objectives of 2001 Regional Transportation Plan and programs on a county and regional level, as well as future programs and studies that may lead to updated TDM goals, policies and objectives for the 2001 RTP through programming of the RTIP.

Specifically, the RTDM Task Force will provide advice to the TCC on planning issues as related to ridesharing, vanpooling, non-motorized transportation (NMT) – bicycle and pedestrian travel, advanced traveler information, HOV, pricing, etc. in the SCAG Region. With respect to NMT, the Task Force will provide direction to SCAG staff in the completion of the 2001 – 2002 Overall Work Program NMT elements consisting of:

1) Development of an issues paper on major NMT issues, data needs, potential strategies, participants, process and schedule.

2) Initiation and development of a strategic planning process for the NMT and

3) Improvement of the NMT database through work with other agencies.

To address the bicycle portion of the NMT work program[1], an informal Regional Bicycle Planning Working Group was established in September 2001. Representatives of the bicycle coalitions in the Inland Empire, Los Angeles, Orange and Ventura Counties were invited to participate. Imperial Valley Association of Governments staff represents Imperial County bicycling interests at this time due to the lack of an organized coalition in that area and the pending subregional bicycle planning efforts in that County.[2] Los Angeles County Metropolitan Transportation Authority and City of Los Angeles staff also provides input in the planning process. Overall, the purpose of the Working Group is to assist SCAG staff in formulating strategies for bicycling for the 2004 RTP and in providing this as input to the RTDM Task Force.

[1] Pedestrian transportation issues will be addressed in the second half of 2001-02 FY.

[2] It is possible that a bicycle transportation advocacy group will evolve through the bicycle master planning processes in El Centro, Westmorland and Imperial.

RTDM Regional Bicycle Planning Working Group

Bicycle Transportation Issues

GOALS OF THE WORKING GROUP

At its initial meeting, the Working Group agreed to the following goals:

1) To identify existing bicycle routes used for commuting;

2) To consider the potential significance of bicycling as a means of commuting to work in the SCAG Region, and:

3) To develop consensus on bicycle commuting strategies for recommendation to the RTDM Task Force. The Group acknowledged that while commuting by bicycle is important in relation to the RTP, the need to address bicycling for non-utilitarian/non-work trips also should be considered as these trips make up the bulk of travel in the region. The Group recommended that this position be conveyed to the RTDM Task Force. At the September 20 meeting of the RTDM Task Force, SCAG Staff reported on the activities of the Working Group including the Working Group's position on the limiting the focus to bicycle commuting only. The RTDM Task Force agreed that bicycle transportation for non-work trips was important and should be acknowledged.

Based on the accepted goals of the Working Group, this paper describes regionally significant bicycle transportation issues in the SCAG region

PROCESS FOR ISSUES IDENTIFICATION

PRELIMINARY DRAFT ISSUES

SCAG staff prepared the first set of preliminary issues as the initial focus areas for the Bicycle Planning Group. These broad issue areas were presented at a meeting of the Working Group in order to solicit and allow for input related to specific issues under each category and to ensure a comprehensive identification of the important issues. Issues were also identified through Coalition bicycle blueprints, conversations with staff of the CTCs, selected cities, and subregions, and other transportation resource materials.

Preliminary issues included:

- Preparation of existing commuter bicycle routes in the region;
- Implementation of bicycle projects/programs;
- Institutional setting;
- Operational, Perceived Barriers, Safety;
- Planning;
- Land Use and
- Other.

RTDM Regional Bicycle Planning Working Group

Bicycle Transportation Issues

FINAL ISSUES

Preliminary issues were organized in matrix format and presented to the Working Group at its November meeting. The matrix also identified those issues that are not under SCAG purview in the context of the Regional Transportation Plan development. Final issues include:

- Gaps in bicycle commuter network including intermodal connections;
- Funding to implement bicycle projects and programs;
- Need to mainstream bicycling transportation programs in the SCAG;
- Modal Integration;
- Safety/Operational and Maintenance Concerns;
- Planning and
- Land Use.

CONSENSUS ON FINAL ISSUES

Based on discussion and assessment of the issues at its November and December meetings, the Group agreed that these issues would be the focus of strategies for the Regional Transportation Plan. SCAG Staff further refined the issues between November and January meetings of the group. Final Bicycle Transportation Issues are summarized in Table 1.

COORDINATION WITH OTHER SCAG PROGRAMS

In the process of preparing the issues paper, SCAG NMT staff coordinated with SCAG's Transit, Livable Communities, Rideshare and RTP Program Staff. In addition, NMT staff presented status reports to the RTDM Task Force and the Regional Transit Task Force wherein staff received feedback on the efforts to integrate transit and bicycling in the region. Subsequent to the Regional Transit Task Force meeting, SCAG staff contacted agencies represented on the Task Force to identify transit and bike policies, goals, and activities, if any, in order to consider strategies to integrate transit and bicycle transportation.

STRATEGIC PLANNING

During the course of the issue identification process, the Working Group, SCAG staff and other agencies identified strategies, shown in a Power Point Presentation to mitigate issues. A major portion of the strategy development involved the consideration of a regional commuter bikeway system for the SCAG region and development of proposed principles to guide the selection of facilities/corridors for a system. The Working Group discussed this concept and came to consensus that it was desirable and appropriate to address bicycle-commuting needs in the SCAG Region.

IDENTIFICATION OF THE REGIONAL COMMUTER BIKEWAY SYSTEM

Members of the Working Group, and the CTCs and Subregions that furnished data were requested to provide bike commute facilities/corridors. Identification of these facilities/corridors was discussed at the December meeting of the Working Group.[3] The Orange County Transportation Authority has included a list of preferred Routes or streets within its Bikeways Strategic Plan. The purpose of the corridors/facilities list would be to compile a list for use in considering the commuter system for the RTP. Comments received from other bicycle advocates and citizens interested in the activities of the Group were also provided to the Working Group members. After due consideration of the issues involved in identifying a regional commuter bikeway system, the Working Group decided that it was not possible to identify commuter corridors at this time.

PRINCIPLES FOR REGIONAL COMMUTER BIKEWAYS

The Working Group agreed to principles, shown in Table 2, to aid in the selection of streets for inclusion in the proposed regional commuter bikeway system.

[3] Orange County Transportation Authority has included a list of preferred Routes or streets within its Bikeways Strategic Plan.

RTDM Regional Bicycle Planning Working Group

Bicycle Transportation Strategies

Table 1. Summary of Bicycle Transportation Issues (Final)

Gaps in the Bikeway Commuter Network Including Intermodal Connections

a. Gaps. One of the strategies being considered for the 2004 RTP is a regional commuter bikeway system. It is anticipated that Class I, II and III facilities will form the system's foundation, but links in the system need to be preliminarily identified, and a planning process is needed to consider alternatives, environmental issues, coordination, funding, etc. Working Group members, and the subregions and CTCs that furnished data were contacted to identify those facilities used by commuters. The OCTA Strategic Plan identifies routes or streets preferred by commuters. The intent is to identify a list of candidate commuter corridors for the purpose of future regional bikeways planning.

b. Intermodal Connections. Relative to intermodal connections, the Regional Transit Task Force provided information on transit and bicycle integration. All operators contacted (Foothill, OmniTrans, LACMTA, Metrolink and Santa Clarita Transit) provide access to bicyclists. The degree of access varies by operator. LACMTA does not allow bicycles on the Red and Blue Lines during peak periods. Both Metrolink and LACMTA train stations are generally equipped with bicycle parking. A region-wide assessment including municipal operators is needed in order to assess the full status and need for transit and bicycle integration in the region.

Funding to implement bicycle programs and project improvements

a. Lack of adequate bicycle funding: Funding for bicycle transportation is inadequate to support a high level of bicycling in the region. Additional funding is needed for the planning, development and construction of identified bikeway system improvements over and above that which has been identified in SCAG's 2001 RTP and in local government and CTC capital programs. It is notable that in the 2001 Regional Transportation Plan, $720 million for non-motorized projects (including bike and pedestrian related) are identified (compared to $400 million over the Plan period of the 1998 RTP). The Baseline contains about $180 million in funding related to non-motorized projects. This represents approximates 0.12 percent of the total Baseline funding. The Plan also calls for the Region's decision-makers to continue to promote the integration of non-motorized modes into the transportation planning process and to take steps to move beyond conceptual planning and development to the implementation of plans and strategies.

Estimates of bicycle funding needs for local governments have not been quantified, largely because bicycling planning is addressed through local bicycle master plans that vary in regard to their status (i.e., currently adopted, outdated, inconsistent with General Plans), and capital improvement programs. Estimates prepared by the LA County Bicycle Coalition for Los Angeles County indicate a need for $622,500,000 over a 25-year period. In the SANBAG subregion, proposed improvements and programs to be developed over the next 20 years continue to require analysis to determine the annual financing requirements, and to allow the County to budget its resources and target funding applications. LACMTA is currently in the bikeway master planning process and has not developed any cost figures.

RTDM Regional Bicycle Planning Working Group

Bicycle Transportation Strategies

Table 1. Summary of Bicycle Transportation Issues (Final - continued)

b. Lack of programs and systems to collect and store necessary bicycle transportation data: Current planning efforts for bicycling transportation is limited by the availability of data. Reliable data sources include the US Census, SCAG's State of the Commute Report, the 1991 SCAG Region Origin and Destination Survey, and the Year 2000 O-D Survey currently underway. Some SCAG subregions also have general data regarding bicycling needs in their jurisdictions. Past planning efforts also represent a source of historic bicycling information. Overall, these sources indicate trips that have been captured in survey/sampling efforts, but there is a sense among bicycle advocates that a pool of cyclists exists that is not being captured in these activities. Cyclists believed to be missed are low-income workers, day laborers, and auto-less individuals who work in household situations. No readily accessible and verified data exist for this pool of workers. In addition, aside from the documented bicycling in the region, no information exists on latent bicycle commute demand or those workers who would use the bicycle if the conditions were conducive to bicycling some of the time or on a regular basis. To make bicycling an integral part of the region's intermodal transportation planning process and system, reliable data for planning are needed. **Bicycle transportation data needs include, but are not limited to** comprehensive bicycle use statistics; user demographics; bicycle travel patterns/corridors; bicycle - involved traffic accidents; bikeway system characteristics; and subregional improvements projects and funding needs. In addition to bicycle data, a comprehensive, integrated system for easy storage and retrieval of bicycle transportation data is needed.

Mainstreaming of bicycle transportation in SCAG Region institutional setting

a. Low priority placed of bicycling transportation in public agency planning and funding programs. Planning for bicycle commuting is not uniformly and methodically integrated into subregional and regional transportation/planning processes in the SCAG region through on-going bicycle planning programs, specialized staff training and appropriate analytical tools. In meeting MPO planning regulations to give due consideration to bicyclists and pedestrians, SCAG has budgeted funds for subregional and staff level programs. The County Transportation Commissions also have funded planning programs and bicycle capital projects in their Call for Projects. Some local governments have adopted bicycle master plans or they are currently updating them and they have CIP that include bike projects. (Note: General Plan guidelines do not mandate that cities and counties consider bicycle {and pedestrian} facilities in addressing the mandatory Circulation Element issues: major thoroughfares, transportation routes, terminals, and other local public utilities and facilities). Bicycle advocates consider these efforts inadequate and desire to see increased bicycle planning and funding and the development of a multi-modal mindset among planning, programming and design staff to facilitate the integration of bicycling into the mainstream of transportation.

Modal Integration

a. Inadequate transit/bicycle integration: Not all the public transit vehicles that operate in the region are equipped to carry bikes. Transit operators may have accommodations to integrate bike transportation, but prohibit the transport of bicycles on trains during peak travel periods, due to space considerations (e.g. LACMTA). The degree to which municipal and regional transit agency policies/vehicles accommodate bicycles on heavily traveled commuter corridors (or provide linkage to major commuter corridors) needs to be determined, in order to understand the overall level of integration region-wide. To help increase bicycle commuting, all public transit vehicles and routes need to be equipped to accommodate bicycles during peak commute periods. This in turn could contribute to congestion and energy consumption reduction and air quality improvement.

RTDM Regional Bicycle Planning Working Group

Bicycle Transportation Strategies

Table 1. Summary of Bicycle Transportation Issues (Final - continued)

b. Greater access to arterials: Bicyclists travel to and from the same work and residential locations as auto commuters using the same corridors (assuming that bicyclists are legally allowed access to them). Bike commuters typically seek the most direct and fastest route available with regular adult commuters often preferring to ride on arterials rather than side streets. Commute periods typically coincide with peak traffic volumes and congestion. Bicycle advocates stress that they do not have the designated access required to accommodate their transportation needs. Lack of necessary access to arterials is a major drawback to bicycle commuting. Increased accommodations for bicyclists could reduce vehicle congestion, bicycle/motorized vehicle conflicts, air pollution and energy consumption.

Safety/Operational and Maintenance Concerns

a. Concerns for Cyclist Safety: The level of safety for bike transportation commuter corridors has not been compiled region-wide. Data on bicycle-involved accidents, accident hot spots and trends should be identified on a subregional level to determine the level of safety for bicycle commuters. Particular attention to safety and design issues is needed in the area of Class I bike path crossings at roadways and at intersection turn movements.

The need for bicycle – related accidents in planning studies is supported by Section 217 of title 23, United States Code (a)(3)(2) provides that transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians. General Plan guidelines do not expressly address safety as related to the Circulation Element.

b. Concerns related to inadequate maintenance: Adequate roadway maintenance is extremely important to bicyclists in helping to ensure a safe and convenient commute. No comprehensive source of information exists on roadway/bikeway maintenance and condition data or the effect of roadway condition on bicycling as a commute mode. Information on the roadway/bikeway condition and maintenance practices is needed in order to determine the status of the system and the magnitude of the problem.

Land Use

a. Inopportune land use development/redevelopment practices: Cities and Counties that undertake arterial widenings and permit new land use development projects do not routinely incorporate or require accommodations and strategies for bicycle transportation. As a result, these capital investments miss opportunities or preclude the incorporation of bike lanes when feasible, for example, into the design stage and construction phases of projects. Policies and practices to routinely consider bicycling could add to the bicycling network possibly leading to greater bicycle use and benefits therefrom.

b. Potentially Hazardous Transportation System Management and Traffic Calming Strategies: Some transportation system management techniques (i.e., dual left turn lanes) and some traffic calming strategies (i.e. bulb-out curbs) pose severe obstacles to the safe use of bicycles. Land uses strategies that encourage and support bicycle commuting and minimize obstacles are needed to sustain and contribute to the enhancement of bicycle transportation. Identified TSM and traffic calming (and other Livable Communities) tools that appear to adversely affect bicycle commuting need to be identified and evaluated for possible amelioration. New and innovative strategies that are proposed for development should be similarly evaluated.

c. Reducing the predominance of Single Occupancy Vehicle (SOV) travel: The presence of motorized vehicle traffic can be a strong deterrent to safe and convenient bicycle commuting. Livable communities strategies and disincentives to SOV travel are needed to reduce the use of SOV and to encourage bicycling and transit/bicycle combinations.

RTDM Regional Bicycle Planning Working Group

Bicycle Transportation Strategies

Table 1. Summary of Bicycle Transportation Issues (Final - continued)

Planning

a. Integration of bicycling into the overall transportation planning process. Methodology does not exist to fully integrate bikes into the regional/subregional traffic modeling process. Off-model analyses have been conducted, (e.g. LACMTA 2000 report), but these need to be evaluated and possibly refined for possible integration into the overall regional transportation planning process. Overall, methodology needs to be developed to analyze bicycling along with other modes of transportation. Staffs of many local jurisdictions also need training on how to move a bicycle from the conceptual development stage through to project implementation.

b. Sustaining current bicycling planning efforts. The impetus behind some current bicycle master planning activities appears to be the increased Bicycle Transportation Account funding to implement plans. Available as grants to local jurisdictions, the emphasis is on projects that benefit bicycling for commuting purposes. The authorization of $7.2 million per year for the next five fiscal years (2001-2006) created an incentive for bicycle planning at the local levels. Bicycle transportation funding programs at the state level needs to be increased. Moreover, local/regional planning/funding programs need to be established and/or sustained through emphasis in adopted plans and from similar funding sources.

c. Constraints on bicycle mode split scenarios: The current level of bicycle commuting in the region is one percent as determined by the 1990 Census. The Region's planners and policy makers find it difficult to justify greater emphasis on bicycling given its low level of use for commuting. Bike advocates suggest that the level of bike commuting is already greater than one percent and a numeric value should be assigned to the bicycle mode split scenarios.

In the planning framework, bicycle transportation scenarios are constrained by the lack of accepted methodologies and data sources to evaluate the performance of bicycles in meeting regional goals. In reality, existing transportation infrastructure/support systems/policies and attitudes have not fostered greater use of the bicycle for commuting purposes. Consequently, proposals to increase the bike mode split are highly speculative. Discussions of the bicycle mode split scenarios will continue to be constrained to sustaining existing bike use until planning methodologies and data are developed to objectively determine biking potential and to get the mode fully integrated into the mix of other transportation planning scenarios and policy options.

RTDM Regional Bicycle Planning Working Group

Bicycle Transportation Strategies

TABLE 2: PRINCIPLES TO IDENTIFY A COMMUTER BIKEWAY SYSTEM (FINAL)	
I. Access	**Existing data sources**
a. Corridor connectivity (linkages)to major employment, educational, business and residential centers, continuity, directness,	1994 activity centers, population & employment densities used in RTP base year and forecast, SCAG MTS, Bike Master Plans
b. Intermodal connectivity (Corridor proximity and connectivity to transit lines, stations, transit centers)	SCAG model, base and forecast years
II. Safety	
a. Consistency with overall RTP goals (2001 RTP Goal #3)[4]	Qualitatively evaluated by RTP TAC/SCAG staff in screening transportation improvement projects, their performance and potential for inclusion in the RTP.
III. Bicycle/System Infrastructure	
a. Existence/presence of designated bikeway on arterial	Bike Master Plans, Bicycle Working Group
b. Availability of alternative parallel corridors for detours.	SCAG Bike maps, SCAG MTS, Bicycle Working Groups
IV. Operating and maintenance conditions	
a. Facility overall conditions (pavement surface), and routine maintenance practices (landscaping, debris/trash removal, etc.) consistent with local policy (2001 RTP Policy #16)[5]	Qualitatively evaluated by RTP TAC/ SCAG staff in screening transportation improvement projects, their performance and potential for inclusion in the RTP.
b. Inventory of O& M expenditures for identified bikeways	Local governments, CTCs (?)
V. Future development potential	
a. Programmed gap closures affecting bikeway facility	CTC Call for Projects, CIPs, RTIP
b. Identified planned gap closures for the bike facility	Bike Master plans
c. Presence/absence of physical barriers and/or need for barrier elimination	Bicycle Master Plans
VI. Facility use characteristics	
a. Existing (year 2000) levels of bike commuting	1990 Census, 2000 O-D Survey (to be released), 2000 Census (to be released)
VII. Policy status of facility/link	
a. Proposed arterial included on SCAG Metropolitan Transportation System (MTS)	SCAG MTS
b. Proposed arterial/facility included in an adopted bicycle master plan	Local Bicycle Master Plans, CTC Master Plans
c. Proposed facility meets the RTDM Task Force goal to serve bike commute trips	RTDM. SCAG staff

[4] 2001 RTP Goal #3 - Serve the transportation needs in safe, reliable and economical ways that also meet the individual needs of those who depend on public transit, such as the elderly, handicapped and disadvantaged.

[5] 2001 RTP Policy #16 - Maintaining and operating the existing transportation system will be a priority over expanding capacity.

Bicycle Issues

Study Goals

- Consider the potential significance of bicycling as a means of commuting to work in the SCAG Region.
- Develop consensus on bicycle commuting strategies.

April 3, 2003
Southern California Association of Governments
Non-Motorized Transportation (TDC)

Bicycle Issues

Study Objectives

- Identify existing regional bicycle network
- Discuss regionally significant bicycling issues
- Develop and qualitatively assess alternatives
- Recommend bicycle strategies to improve bicycle commuting in the SCAG Region

April 3, 2003
Southern California Association of Governments
Non-Motorized Transportation (TDC)

Bicycle Issues

Participants & Invitees

- California Association of Bicycling Organizations
- Inland Empire Bicycle Commuter Coalition
- IVAG Subregional Staff
- LA County Bicycle Coalition
- Orange County Bicycle Coalition
- Ventura County Bicycle Coalition
- LACMTA Bicycle Transportation Program Staff
- LADOT Bicycle Transportation Program Staff
- Long Beach Cyclists
- SCAG Transit, Livable Communities, TDM & Rideshare Staff

April 3, 2003
Southern California Association of Governments
Non-Motorized Transportation (TDC)

Status Report

Bicycle Issues

Items Completed

- Draft Bikeway Network Working Maps
- Draft Bicycle Transportation Issues
- Consider bicycle commuting scenarios
- Draft Bicycle Transportation Strategies

Transportation Issues

Bicycle Issues

(not rank ordered)

- Gaps in commuter bikeway network including intermodal connections.
- Funding to implement bicycle programs and projects.
- Modal integration.
- Safety - operational and maintenance concerns.
- Planning.
- Land use.

Commuter Bikeway

Bicycle Issues

Network Gaps

- Prepare working maps of the existing bikeway network.
- Identify gaps and gap closure projects potential streets and facilities/corridors for inclusion on the commuter oriented bicycle transportation network.
- Implement bicycle commuter gap closures and other bicycle improvements in capital improvement programs (CIP) and call for projects.

Commuter Bikeway

Intermodal Connections

Bicycle Issues

April 3, 2003

Southern California Association of Governments
Non-Motorized Transportation (TCC)

Funding Strategies

Bicycle Issues

- Adopt and apply criteria to evaluate project proposed in CTC Calls for Projects.
- Adjust CTC and subregional funding program priorities to fund identified high priority commuter oriented bicycle facilities.
- Develop incentives to encourage major employers to install bicycle racks, lockers, and parking and locker and shower facilities.

April 3, 2003

Southern California Association of Governments
Non-Motorized Transportation (TCC)

Funding Strategies

Bicycle Issues

- Identify funding sources for information system development, maintenance and update.
- Consider integrating bicycling information into SCAG's Regional Transportation Management System.
- Prepare a regional GIS data needs assessment.
- Encourage SCAG subregions to coordinate and integrate bicycle transportation plans and project programming with adjacent subregions.

April 3, 2003

Southern California Association of Governments
Non-Motorized Transportation (TCC)

Mainstream Strategies

Bicycle Issues

- Integrate bicycle, transit and growth visioning/livable communities strategies and in local plans.
- Develop criteria to boost bicycle commuter lanes and integration with other modes in Calls for Projects.
- Sponsor subregional bicycle summits to examine bicycle issues, share experiences and strategies.

April 3, 2003

Modal Integration

Bicycle Issues

Inadequate transit/bicycle integration

- Adopt policies to accommodate bicycle transportation in Short and Long Range Plans of transit operators.
- Encourage installation of bicycle racks on transit vehicles and cyclist access on bus & rail lines.
- Implement eligibility criteria to boost bicycle priority and integration with other modes in Call for Projects.
- Encourage implementation of joint marketing programs targeting bicycle and transit programs.

April 3, 2003

Modal Integration

Bicycle Issues

Need for greater access to arterials

- Adopt principles for identifying bicycle commuter corridors.
- Encourage CTCs to integrate principles in Calls for Projects to evaluate bikeway proposals.
- Identify preferred bicyclist commuter corridors in the local government bicycle master planning process.
- Encourage local transportation plans to integrate bicycles into arterial development and design.

April 3, 2003

Modal Integration

Bicycle Issues

Safety & Operational Concerns

Encourage local jurisdictions to identify bicycle - involved accident hot spots.

Support bicycle sensitive intersection signal detection.

Support curb lanes and left and right turn pockets to facilitate turning and through movements and overall traffic flow.

Consider implementation of adult commuter bicycle education and safety programs for bicyclists and motorists.

Modal Integration

Bicycle Issues

Safety & Maintenance Concerns

- Fund the acceleration of pavement maintenance schedules along bicycle commuter corridors.
- Develop a reliable source of funding for bikeway commuter facility and bicycle sensitive traffic signal maintenance.
- Develop written procedures to follow to maintain all portions of the bicycle commuter facility and bicycle detection system.

Planning Strategies

Bicycle Issues

Integration into transportation planning

- Prepare white paper on integration of bikes into AASHTO, ITE, DOT, APA design manuals.
- Adopt principles for identifying commuter bicycle corridors in the Regional Transportation Plan.
- Prepare bicycle master plans and regular updates.
- Develop training seminars for local government planners in bicycle transportation planning.

Planning Strategies

Bicycle Issues

Sustaining bicycle planning efforts

- Develop training seminars for local government planners in bicycle transportation planning.
- Fund the staffing and development of bicycle transportation planning programs.

Planning Strategies

Bicycle Issues

Bicycle mode split development

- Identify mode split scenarios for recommendation to the RTDM Task Force.
- Assess the potential to significantly increase bicycle mode split.

Land Use Strategies

Bicycle Issues

- Fund the development and implementation of incentives for bicycle commuters.
- Fund the development and implementation of stronger incentive/potential penalties to reduce SOV work trips.
- Include bicycle improvements in bridge widening, arterial widening projects, and in the permitting process for new developments as appropriate.
- Integrate and implement bicycle transportation recommendations in Livable Communities plans.